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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,073	12/26/2001	Kohji Yoshie	KON-1703	2772

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EXAMINER	
YAN, REN LUO	

ART UNIT	PAPER NUMBER
2854	

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/033,073	YOSHIE ET AL.	
	Examiner	Art Unit	
	Ren L. Yan	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *15-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 20* is/are rejected.

7)☒ Claim(s) *11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim 11 is objected to because it fails to provide a further limitation to its parent claim. The claimed subject matter of claim 11 has already been included in its parent claims 9 and 10.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Copp(3,955,454). The patent to Copp teaches a hole-punching processor for forming a punched-hole on a sheet in a conveying path as claimed including a hole-punching device 34 movable in a direction perpendicular to a conveyance direction of the sheet, a sheet-edge detector 36 for detecting a side-edge of the sheet in a direction parallel to the conveyance direction of the sheet, and the sheet-edge detector 36 is in a fixed relationship with the hole-punching device on a carriage 28(guide member) so that the two move in conjunction with each other in a direction perpendicular to the sheet conveyance direction to punch a hole in the sheet, based on positional information of the side-edge detected by the sheet-edge detector 36. See Figs. 1-7 and column 3, lines 9-43 in Copp for details.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Copp in view of Suzuki et al((5,182,861). Copp teaches all that is claimed except for the use of multiple sheet-edge detectors each corresponds to a different sheet size as recited. Suzuki et al teach in a sheet drafting apparatus the conventionality of using a plurality of sheet edge detectors 90 each corresponds to a different sheet width size for detection of the sheet edge. See Fig. 1 and column 3, lines 51-53 in Suzuki et al for example. It would have been obvious to one of ordinary skill in the art to provide the hole-punching apparatus of Copp with the plurality of sheet-edge detectors appropriately disposed as taught by Suzuki et al so as to reduce the travel distance otherwise required of a single detector in order to suit for different width size sheets being processed.

Claims 3, 9-11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al(6,430,382) in view of Copp(3,955,454).

With respect to claim 9, the patent to Okamoto et al teaches the structure of an image forming apparatus with a hole-punching processor as claimed including an image forming section to form an image on a sheet, an ejecting section to eject the sheet after being printed and a hole-punching processor unit 50 for punching a hole on a sheet in a conveying path and for conveying the sheet through the hole-punching processor unit. The hole-punching processor unit 50 has hole-punching rollers 40 and 41 that move in a direction perpendicular to a conveyance direction of the sheet and has a sheet-edge detector 43 to detect a side-edge of the sheet in a direction parallel to the conveyance direction of the sheet. The hole-punching rollers 40 and 41 move with the sheet-edge detector 43 to the center of the sheet, based on the positional information of the side-edge detected by the sheet-edge detector 43, to punch a hole in the sheet.

See Figs. 6-8 and column 8, line 59 through column 9, line 37 in Okamoto et al for details. However, the sheet-edge detector and the hole-punching device or Okamoto et al are not in a fixed relationship so as to move in conjunction with each other as recited. The patent to Copp teaches a hole-punching processor for forming a punched-hole on a sheet in a conveying path including a hole-punching device 34 movable in a direction perpendicular to a conveyance direction of the sheet, a sheet-edge detector 36 for detecting a side-edge of the sheet in a direction parallel to the conveyance direction of the sheet, and the sheet-edge detector 36 is in a fixed relationship with the hole-punching device on a carriage 28 so that the two move in conjunction with each other in a direction perpendicular to the sheet conveyance direction to punch a hole in the sheet, based on positional information of the side-edge detected by the sheet-edge detector 36. See Figs. 1-7 and column 3, lines 9-43 in Copp for example. It would have been obvious to one of ordinary skill in the art to provide the image forming apparatus of Okamoto et al with the hole-punching device and the sheet-edge detector mounted in a fixed relationship and move in conjunction with each other as taught by Copp in order to achieve more accurate sheet edge sensing and hole punching outcome since the two devices are fixed in a predetermined relationship with each other. With respect to claim 3, Okamoto et al teach in column 9, lines 27-30 that when a leading edge of the sheet reaches to the hole-punching processor unit 50, the hole-punching rollers and sheet edge detector move in a direction perpendicular to the sheet conveyance direction so that the sheet-edge detector detects a position of the side-edge of the sheet. With respect to claims 10 and 14, Okamoto et al teach to move the sheet-edge detector 43 to a home position as shown in Fig. 8F after the hole-punching operation on a sheet and in case of a non-punching mode, the hole-punching rollers 40 and 41 are not

rotated and sheets can be fed through the gap between the rollers without being punched. See the first sentence in column 9.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al in view of Copp as applied to claims 9 and 10 above and further in view of Suzuki et al((5,182,861). Okamoto et al, as modified by Copp, teach all that is claimed except for the use of multiple sheet-edge detectors each corresponds to a different sheet size as recited. Suzuki et al teach in a sheet drafting apparatus the conventionality of using a plurality of sheet edge detectors 90 each corresponds to a different sheet width size for detection of the sheet edge. See Fig. 1 and column 3, lines 51-53 in Suzuki et al for example. It would have been obvious to one of ordinary skill in the art to provide the image forming apparatus of Okamoto et al, as modified by Copp, with the plurality of sheet-edge detectors appropriately disposed as taught by Suzuki et al so as to reduce the travel distance otherwise required of a single detector in order to suit for different width size sheets being printed.

Claims 4, 6, 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al in view of Copp as applied to claims 3 and 10 above, and further in view of Kamada et al(4,789,903). Okamoto et al, as modified by Copp, teach all that is claimed except that the sheet-edge detector is not used to detect the leading edge and trailing edge of the sheet and it is unclear the type of sheet-edge detector is used. The patent to Kamada et al teaches in an image forming apparatus the conventional use of a reflection type photo detector to detect the leading edge, the trailing edge and the side edge of the recording paper sheet. See the paragraph bridging columns 7 and 8 in Kamada et al for example. In view of the teaching of Kamada et al, it would have been obvious to those having ordinary skill in the art to provide the image forming

apparatus of Okamoto et al, as modified by Copp, with the reflection type photo detector capable of detecting the leading edge, the trailing edge and the side edge of the sheet so as to simplify the structural requirement of the image forming apparatus.

Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al in view of Copp and Kamada et al as applied to claims 4 and 7 above, and further in view of Suzuki et al. Okamoto et al, as modified by Copp and Kamada et al, teach all that is claimed except for the use of multiple sheet-edge detectors each corresponds to a different sheet size as recited. Suzuki et al teach in a sheet drafting apparatus the conventionality of using a plurality of sheet edge detectors 90 each corresponds to a different sheet width size for detection of the sheet edge. See Fig. 1 and column 3, lines 51-53 in Suzuki et al for example. It would have been obvious to one of ordinary skill in the art to provide the image forming apparatus of Okamoto et al, as modified by Copp and Kamada et al, with the plurality of sheet-edge detectors appropriately disposed as taught by Suzuki et al so as to reduce the travel distance otherwise required of a single detector in order to suit for different width size sheets being printed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ren L Yan whose telephone number is 571-272-2173. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on 571-272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ren L Yan
Primary Examiner
Art Unit 2854

Ren Yan
April 25, 2005